

nices lewisii with 7 *Crepidula excavata* Brod. on it washed in after a storm.

The territory covered by this list is quite limited. It includes about 2 miles of shore along the Bay and a short distance along the ocean-front on either side of the narrow entrance of the Bay. A total distance of 3 miles of shore.

All the species listed have been collected within the last three years, most of them by Mrs. Chace and myself. A few were collected by Mrs. J. E. Herbst, Mr. Valentine Herbst and Mr. Otto Kiem of Seal Beach.

A HOME MADE VIVARIUM.

BY LILLIAN DYER THOMPSON.

I am having such success with a vivarium which I made that I thought perhaps some other conchologists might like to make some so that they, too, could study more closely the living animal, and become acquainted with the way they eat, walk, build their shells, etc.

I first bought a large roasting pan and a smaller pan that was as long as the other wide. These cost me twenty cents. Then I had a box made that the bigger pan would snugly fit and had it made six inches deep. The cover was of a fine-meshed wire netting fastened to a hinged frame. The box, of $\frac{7}{8}$ " spruce stock, was made at odd moments and cost me twenty-five cents.

In one or two places, where the larger pan did not fit the case, I stuffed the cracks with wadded paper. Then I put the smaller pan across one end of the larger and filled any cracks with moss and earth.

I put a tuft of grass (which I shall supplant with a fresh-water alga soon) and a dead *Busycon* shell that I had washed to remove all traces of salt, which I have been told is injurious to snails. I then partially filled the pan with water, and my little fresh-water pond was ready for occupancy.

The remainder of the larger pan I filled with moss and bunches of grass containing growing plantain (of which the snails are very fond). As some snails love to hide under dead leaves, I put some in for them, and I also put in a stick that

formed a stairway from the moss to the cover. I knew that the snails would want some lime to aid them in constructing shell-forming material, so I put in a *Modiola* after I had washed it.

I gave them corn meal on half a scallop shell and put a *Polynices* shell full of water beside it, sinking the shell into the earth until the lip was level with the surface. The snails are very fond of corn meal; they also relish lettuce and cabbage leaves, green grass, plantain, and all succulent weeds.

As I live in Cambridge, Mass., where limestone formations are scarce, I have had largely to depend upon the kindness of others for my pets. As I have received quite a few specimens through the mail, I thought others might want to do the same; so will, in as few words as possible, tell how mine were sent. Some came way from California in a tin box, with a little grass. As they could not get much air, they built epiphragms over the apertures, which they broke down soon after they were put in the vivarium. The majority were sent with a little grass or lettuce in pasteboard or wooden boxes (which are the only things to send specimens in, as they can breathe freely).

In closing, I shall give a list of species that I now have in my vivarium, with the localities. Those with the asterisk (*) have raised families since they came.

Lymnaea palustris Müll, from Livingston Co., Michigan.

Campeloma decisum Say *, from Shawsheen River, Bedford, Mass.

Physa heterostropha Say *, from Shawsheen River, Bedford, Mass:

Planorbis antrosus Conrad *, Shawsheen River, Bedford, Mass.

Succinea ovalis Say *, Waverly, Mass.

Epiphragmophora tudiculata Binn, near Los Angeles, Cal.

Polygyra tridentata Say, Livingston Co., Mich., and New York City.

Polygyra thyroides Say, Livingston Co., Mich., and Upper Montclair, N. J.

Polygyra multilineata Say, Livingston Co., Mich.

Polygyra monodon Rach., Livingston Co., Mich.

Polygyra albolabris, Blue Hills, Mass.

Polygyra thyroides Say, Middlesex Fells, Melrose, Mass.

Zonitoides arboreus Say, Middlesex Fells, Melrose, Mass.